Restoring oysters in the area: Bivalve colonies to be natural filters in waters

Published in the *Asbury Park Press* 07/21/05
BY TERRY GAUTHIER MUESSIG
STAFF WRITER

Baykeeper volunteers keep a microscopic eye on the million oyster larvae they planted on clamshell-based beds in Highlands.

The NY/NJ Baykeeper, in conjunction with the field biology and ecology class from Brookdale Community College in the Lincroft section of Middletown, began its newest oyster-restoration program using four 2,000-gallon tanks to breed the microscopic bivalves.

"These oysters are not for consumption," said Robert Macaluso, manager of Brookdale's Sandy Hook Field Station.

Macaluso, of Brick, has been an adjunct instructor at the field station for 12 years. The oyster-garden program is to restore the estuaries in the area.

The Baykeepers have been working to restore oyster beds in the Hudson and Raritan bays since 1997.

"This program helps teach the students science and community," he said. "The students learn the life cycle of the organism (the oyster) and the importance the oysters have in the community (filtering the water)."

"This Brookdale project began in May with setting up the tanks," said Keven Canning, 28, of Long Branch. Canning is a student at the college and works for the Baykeeper.

Canning said he has always had an interest in marine biology and was thrilled the oyster restoration was being done in waters close to home.

The tank operates with a filter similar to a pool filter, Macaluso said.

Once the tanks were filled with the bay water and hundreds of unused clamshells were placed in each tank, the filter system was turned on to prepare the tanks for the arrival of the larvae.

On July 7, a few days after the filter system was turned on, the oyster larvae were released into the tanks.

"We are hoping that we get 4 percent to grow," Macaluso said.

According to Macaluso, for a larva to live, it has to attach itself onto something hard, in this case, the clamshell.

The waiting period to see how many oysters do attach themselves to the

clamshells is about three weeks, he said. By this week, the oysters, known as spat at this stage, then are placed into Taylor floats, which are made of mesh netting and PVC piping. The floats are in the bay near the tanks.

"These waters have great water flow for the oysters," said Gef Flimlin, the marine extension agent for Commercial Fisheries and Aquaculture from the Rutgers Cooperative Extension.

"The oysters play a keystone role in cleansing our water," Macaluso said.

The oysters can filter up to 50 gallons of water a day, he said, and consume phytoplankton (microalgae). The oyster reefs also become the home to other fish, grass shrimp, anemones and crabs.

The oyster spats stay in the floats for about a month, Macaluso said.

By the end of August or beginning of September, the oysters will be large enough, at least the size of a quarter or larger, to be transported to the oyster beds in Keyport or Red Bank, he said.

For the past three years, the two groups, along with volunteer groups from local high schools, have been dumping clamshells into the Raritan Bay and the Navesink River to form new oyster beds for the Baykeepers' gardening program.

"In the 1800s, there were 400 boats out of Keyport clamming for oysters," Flimlin said.

The oyster population began its decline in the 1900s, with harvesting, pollution, disease and siltation, he said.

Prior to the oyster reefs' demise, there were about 350 square miles of reefs in the estuary from the Hudson River to the Shrewsbury and Navesink rivers, Flimlin said.

"The oysters are the link to our clean waters at our beaches," Macaluso said. "They (the oysters) are an important part of our environment."

For more information about the Baykeepers' oyster-gardening programs, call (732) 888-9870.